

DETECTION OF RECORDED DATA EMPLOYING INTERPOLATION WITH GAIN COMPENSATION

ABSTRACT OF THE DISCLOSURE

5 A repeatable run-out (RRO) detector employs one or more digital interpolators to interpolate asynchronous sample values representing an RRO address mark (AM) and RRO data, and an asynchronous maximum-likelihood (AML) detector to detect the RRO AM. The AML detector selects one of either the asynchronous or interpolated sample sequences that are closest in distance to the ideal RRO AM sample sequence. In addition, a gain value is generated for each of the asynchronous and interpolated sample sequences. Once the RRO AM is detected, the AML detector provides a RRO AM found signal. Gain estimate values for either the selected asynchronous or selected interpolated sample sequences corresponding to the RRO AM found signal are averaged over a predefined number of detection events to generate a best gain error metric (BGEM). The BGEM is employed to adjust the gain of the asynchronous sample sequence.

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